

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Met Asp Gly Lys Ser Lys Met Gln Ala Glu Lys His Leu Thr Gly Thr  
1 5 10 15  
Leu Val Leu Ser Val Phe Thr Ala Val Leu Gly Phe Phe Gln Tyr Gly  
20 25 30  
Tyr Ser Leu Gly Val Ile Asn Ala Pro Gln Lys Val Ile Glu Ala His  
35 40 45  
Tyr Gly Arg Met Leu Gly Ala Ile Pro Met Val Arg His Ala Thr Asn  
50 55 60  
Thr Ser Arg Asp Asn Ala Thr Ile Thr Val Thr Ile Pro Gly Thr Glu  
65 70 75 80  
Ala Trp Gly Ser Ser Glu Gly Thr Leu Ala Pro Ser Ala Gly Phe Glu  
85 90 95  
Asp Pro Thr Val Ser Pro His Ile Leu Thr Met Tyr Trp Ser Leu Ser  
100 105 110  
Val Ser Met Phe Ala Val Gly Gly Met Val Ser Ser Phe Thr Val Gly  
115 120 125  
Trp Ile Gly Asp Arg Leu Gly Arg Val Lys Ala Met Leu Val Val Asn  
130 135 140  
Val Leu Ser Ile Ala Gly Asn Leu Leu Met Gly Leu Ala Lys Met Gly  
145 150 155 160  
Pro Ser His Ile Leu Ile Ile Ala Gly Arg Ala Ile Thr Gly Leu Tyr  
165 170 175  
Cys Gly Leu Ser Ser Gly Leu Val Pro Met Tyr Val Ser Glu Val Ser  
180 185 190  
Pro Thr Ala Leu Arg Gly Ala Leu Gly Thr Leu His Gln Leu Ala Ile  
195 200 205  
Val Thr Gly Ile Leu Ile Ser Gln Val Leu Gly Leu Asp Phe Leu Leu  
210 215 220  
Gly Asn Asp Glu Leu Trp Pro Leu Leu Leu Gly Leu Ser Gly Val Ala  
225 230 235 240  
Ala Leu Leu Gln Phe Phe Leu Leu Leu Leu Cys Pro Glu Ser Pro Arg  
245 250 255  
Tyr Leu Tyr Ile Lys Leu Gly Lys Val Glu Glu Ala Lys Lys Ser Leu  
260 265 270  
Lys Arg Leu Arg Gly Asn Cys Asp Pro Met Lys Glu Ile Ala Glu Met  
275 280 285  
Glu Lys Glu Lys Gln Glu Ala Ala Ser Glu Lys Arg Val Ser Ile Gly  
290 295 300  
Gln Leu Phe Ser Ser Ser Lys Tyr Arg Gln Ala Val Ile Val Ala Leu  
305 310 315 320  
Met Val Gln Ile Ser Gln Gln Phe Ser Gly Ile Asn Ala Ile Phe Tyr  
325 330 335  
Tyr Ser Thr Asn Ile Phe Gln Arg Ala Gly Val Gly Gln Pro Val Tyr  
340 345 350  
Tyr Ala Thr Ile Gly Val Gly Val Val Asn Thr Val Phe Thr Val Ile  
355 360 365  
Ser Val Phe Leu Val Glu Lys Ala Gly Arg Arg Ser Leu Phe Leu Ala  
370 375 380  
Gly Leu Met Gly Met Leu Ile Ser Ala Val Ala Met Thr Val Gly Leu  
385 390 395 400  
Val Leu Leu Ser Gln Phe Ala Trp Met Ser Tyr Val Ser Met Val Ala  
405 410 415  
Ile Phe Leu Phe Val Ile Phe Phe Glu Val Gly Pro Gly Pro Ile Pro  
420 425 430  
Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro Ala Ala  
435 440 445  
Ile Ala Val Ala Gly Phe Cys Asn Trp Ala Cys Asn Phe Ile Val Gly  
450 455 460

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Met	Cys	Phe	Gln	Tyr	Ile	Ala	Asp	Leu	Cys	Gly	Pro	Tyr	Val	Phe	Val
465					470					475					480
Val	Phe	Ala	Val	Leu	Leu	Leu	Val	Phe	Phe	Leu	Phe	Ala	Tyr	Leu	Lys
			485						490						495
Val	Pro	Glu	Thr	Lys	Gly	Lys	Ser	Phe	Glu	Glu	Ile	Ala	Ala	Ala	Phe
			500					505						510	
Arg	Arg	Lys	Lys	Leu	Pro	Ala	Lys	Ser	Met	Thr	Glu	Leu	Glu	Asp	Leu
		515					520						525		
Arg	Gly	Gly	Glu	Glu	Ala										
		530													

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 494 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Met	Gly	Thr	Thr	Lys	Val	Thr	Thr	Pro	Leu	Ile	Phe	Ala	Ile	Ser	Ile
1				5					10					15	
Ala	Thr	Ile	Gly	Ser	Phe	Gln	Phe	Gly	Tyr	Asn	Thr	Gly	Val	Ile	Asn
			20					25					30		
Ala	Pro	Glu	Ala	Ile	Ile	Lys	Asp	Phe	Leu	Asn	Tyr	Thr	Leu	Glu	Glu
			35				40					45			
Arg	Ser	Glu	Thr	Pro	Pro	Ser	Ser	Val	Leu	Leu	Thr	Ser	Leu	Trp	Ser
	50					55					60				
Leu	Ser	Val	Ala	Ile	Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	Phe	Ser
	65				70				75						80
Val	Gly	Leu	Phe	Val	Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	Leu	Ile
				85				90						95	
Val	Asn	Leu	Leu	Ala	Ile	Ala	Gly	Gly	Cys	Leu	Met	Gly	Phe	Cys	Lys
			100				105					110			
Ile	Ala	Glu	Ser	Val	Glu	Met	Leu	Ile	Leu	Gly	Arg	Leu	Ile	Ile	Gly
	115					120					125				
Leu	Phe	Cys	Gly	Leu	Cys	Thr	Gly	Phe	Val	Pro	Met	Tyr	Ile	Gly	Glu
	130					135					140				
Ile	Ser	Pro	Thr	Ala	Leu	Arg	Gly	Ala	Phe	Gly	Thr	Leu	Asn	Gln	Leu
	145				150				155						160
Gly	Ile	Val	Ile	Gly	Ile	Leu	Val	Ala	Gln	Ile	Phe	Gly	Leu	Lys	Val
			165					170						175	
Ile	Leu	Gly	Thr	Glu	Asp	Leu	Trp	Pro	Leu	Leu	Leu	Gly	Phe	Thr	Ile
			180					185					190		
Leu	Pro	Ala	Ile	Ile	Gln	Cys	Ala	Ala	Leu	Pro	Phe	Cys	Pro	Glu	Ser
		195				200						205			
Pro	Arg	Phe	Leu	Leu	Ile	Asn	Arg	Lys	Glu	Glu	Glu	Lys	Ala	Lys	Glu
	210					215					220				
Ile	Leu	Gln	Arg	Leu	Trp	Gly	Thr	Glu	Asp	Val	Ala	Gln	Asp	Ile	Gln
	225				230				235						240
Glu	Met	Lys	Asp	Glu	Ser	Met	Arg	Met	Ser	Gln	Glu	Lys	Gln	Val	Thr
			245					250						255	
Val	Leu	Glu	Leu	Phe	Arg	Ala	Pro	Asn	Tyr	Arg	Gln	Pro	Ile	Ile	Ile
			260					265					270		
Ser	Ile	Met	Leu	Gln	Leu	Ser	Gln	Gln	Leu	Ser	Gly	Ile	Asn	Ala	Val
		275					280					285			
Phe	Tyr	Tyr	Ser	Thr	Gly	Ile	Phe	Lys	Asp	Ala	Gly	Val	Gln	Glu	Pro
	290					295					300				
Val	Tyr	Ala	Thr	Ile	Gly	Ala	Gly	Val	Val	Asn	Thr	Ile	Phe	Thr	Val
	305				310					315					320

